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NOTES ON PAPUINA.

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All *Papuina*¹ are arboreal; this habit is as "good" a generic character as any anatomical feature could be. Parenthetically, I may remark, that my friend Mr. Brazier, who has probably gathered more living *Papuina* than any other naturalist, agrees with me that the account (Ann. Mag. N. H., (4) xx, p. 242) of a *Papuina* clinging half way up a reed in a brackish swamp is quite incredible. The usual position of *Papuina* is upon the trunks or limbs of trees where an unpracticed eye might take it for a rough bit of bark. In southern Europe the *Macularia* perch just so on precipitous rocks; indeed, I recollect there capturing an *H. nicensis* on an olive tree in exactly the manner affected by the *Papuina* in New Guinea.

A small group of Queensland snails, viz, *conscendens* Cox, *fuscata* Pfeiffer, and *bidwilli* Cox, seem to differ from the main body of the genus in their habits. Not the stem or branches, but the leaves of trees are chosen by these for their favorite abode. To suit the situation the shell has been modified until the contour would suggest *Partula* rather than *Papuina*. The more conical shape has proba-

¹This name is now generally used for the conical *Helices* characteristic of the Papuan and Solomon Island faunas, formerly called *Geotrochus*.

bly been adopted for greater safety in the exposed tree tops; to the same end every superfluous atom of weight has been abandoned, the shell reduced to the thinnest, and the reflected lip dispensed with. Under the lens the apex is seen to be of one and a half whorls, black or darker than the adult shell, smooth and subglobose. Oblique growth lines are the predominant features of the adult sculpture; by flashing the shell in the sunshine under a lens, an extremely minutely shagreen surface is perceptible in the gleam, and here and there broken lengths are decipherable of engraved spiral lines. Viewing the shells of these three species by transmitted light the color markings are seen as translucent spaces in the opaque shell. I should interpret these signs as indicating a descent from an ancestor like *naso* and *macgillivrayi* through a form very close to *bidwilli* Pfeiffer.

The minute almost imperceptible shagreen surface may represent the coarse sculpture of *naso*; the evanescent spiral lines are traceable from the clear cut lines of *macgillivrayi* through the fainter sculpture of *bidwilli* Pfr., to their vanishing representative in *bidwilli* Cox. But the minute subglobose apex and especially the translucent spiral color bands ally this group unmistakably with *Papuina*. Admitting this, in default of anatomical examination, it will be necessary to rename the shell hitherto known as *Bulimus bidwilli* Cox, lest it should clash with that other *Papuina* described by Pfeiffer as *Helix bidwilli*. I therefore propose that in allusion to its peculiar habits, it be henceforth called *Papuina folicola*.

Between these leaf-dwelling *Papuina* of Queensland and *Bulimus mageni* Gassies, of New Caledonia, I note a strong resemblance in color, form and sculpture, but especially in their translucent color bands. Until further research settles authoritively the position of this species I would provisionally class it with the foregoing.

SAN PEDRO AS A COLLECTING GROUND.

San Pedro, California, is remarkable for the number and variety of recent and fossil mollusks.

New forms and an unusual abundance of known species are constantly being found.

This is due in a great measure to the extension of the Government breakwater, which has made changes in the sea currents near the